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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/644,934	08/21/2003	Jun-Ichi Yamato	Q76950	7364

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EXAMINER
MEHRMANESH, ELMIRA

ART UNIT	PAPER NUMBER
2113	

DATE MAILED: 12/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 September 2006*.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20 and 22-34* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20 and 22-34* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *21 August 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☒ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

This action is in response to an amendment filed on September 21, 2006 for the

application of Yamato et al., for a "Data copying system, relaying device, data

transfer/reception system and program for copying of data in storage unit" filed August

21, 2003.

Claims 1-20, 22-34 are pending in the application.

Claims 1-20, 22-34 are rejected under 35 USC § 103.

Claims 1, 4, 20, 27, and 29 have been amended.

Claim 21 has been cancelled.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining

obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-19, 27-29, 31-34 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Staheli et al. (U.S. Patent No. 5,537,533) in view of Fukuhara et al.

(U.S. Patent No. 6,760,861).

As per claim 1, Staheli discloses a data copying system comprising:

a first storage unit (Fig. 1, element 16)

a second storage unit (Fig. 1, element 20)

data stored in said first storage unit being copied by mirroring or backup to said

second storage unit (col. 8, lines 49-55) over a communication network (Fig. 1, element

50)

a relaying device for relaying data (Fig. 1, elements 30, 40) transferred from said

first storage unit (Fig. 1, element 16) to said second data storage unit (Fig. 1, element

20) over the communication network (Fig. 1, element 50)

said relaying device being provided in a location pre-calculated so that, even if

said first storage device cannot be operated due to a disaster, the operation of said

relaying device can be continued (col. 15, lines 2-7)

wherein said first storage unit includes data transfer processing means for

controlling data transfer, said data transfer processing means regarding the data

transfer from said first storage unit to said second storage unit as being completed

when data transfer from said first storage unit to said relaying device is completed (col.

12, lines 2-11).

Staheli fails to explicitly disclose a relaying device in a different location.

Fukuhara teaches:

A relaying device being provided in a location that is pre-calculated and different from a location of said first and second storage units (col. 18, lines 23-34).

It would have been obvious to one of ordinary skill in the art at the time the invention to use the method of remote mirroring of digital data of Staheli et al. in combination with the system of providing continuous operation independent of device failure or disaster of Fukuhara et al. to effectively recover from failure/disasters.

One of ordinary skill in the art at the time the invention would have been motivated to make the combination because Staheli et al. discloses a system for remote mirroring of digital data from a primary network server to a remote replacement network server (Fig. 1). Fukuhara et al. discloses a system and method for data processing and/or data storage, which provides continuous computing operations independent of device failures or unavailability (col. 4, lines 65-67 through col. 5, lines 1-7).

As per claim 2, Staheli discloses said relaying device includes:

non-volatile storage means for storing a command and data received from the first storage unit (Fig. 2, elements 66, 68)

relaying processing means for relay controlling the data, said relaying processing means causing the command and the data received from said first storage unit to be stored in said non-volatile storage means and transmitting the command and data stored in said non-volatile storage means to said second storage unit at an optional timing (col. 14, lines 36-53).

As per claim 3, Staheli fails to explicitly disclose a plurality of relaying devices.

Fukuhara teaches:

a plurality of said relaying devices (Fig. 3, *multicasting engine*), wherein said data transfer processing means in said first storage unit simultaneously sends data stored in said first storage unit to a plurality of said relaying devices (Fig. 21).

As per claim 4, Staheli discloses a relaying device (Fig. 1, element 30) for relaying data transferred from a first storage unit (Fig. 1, element 16) to a second storage unit (Fig. 1, element 20), said relaying device comprising:

storage means for storing data received from said first storage unit (Fig. 2, elements 66, 68) and (col. 14, lines 36-53)

relaying processing means for relay controlling data (Fig. 1, elements 30, 40)

wherein said relaying processing means causes data received from said first storage unit to be stored in said storage means (col. 14, lines 36-53) .

wherein, when the data is stored in said storage means, said relaying processing means sends a response (col. 12, lines 2-11) to said first storage unit and sends the data stored in said storage means to said second storage unit (col. 13, lines 12-18).

Staheli fails to explicitly disclose a relaying device in a different location.

Fukuhara teaches:

Wherein said relaying device is provided in a location that is pre-calculated and different from a location of said first and second storage units, so that, even if said first

storage device cannot be operated due to a disaster, the operation of said relaying

device can be continued (col. 18, lines 23-34).

As per claim 5, Staheli discloses a transmitting/receiving method, in which data

transmitted from a source unit (Fig. 1, element 10) is received by a destination unit (Fig.

1, element 12), said method comprising the steps of:

said source unit creating at least one redundant data for error correction from

original data to be transmitted (Fig. 3)

Staheli fails to explicitly disclose transmitting data in separate data transmission

units.

Fukuhara teaches:

said source unit transmitting the original data and the redundant data in separate

data transmission units (Fig. 6 and 7) and (Fig. 5, element 124).

As per claim 6, Staheli discloses said destination unit (Fig. 1, element 12)

executing error correction processing before completion of reception of an entire

assemblage of data (col. 6, lines 7-15) comprised of a set of the original data and the

redundant data, at a stage when a portion of said data set enabling partial error

correction of said original data is received. Figure 4, shows events involved in receiving

a packet of mirrored data sent from the primary data transfer unit over the

communication link to the remote data transfer unit.

As per claim 7, Staheli discloses said source unit dividing the original data into

divided data and creating redundant data which enables restoration of the original data

even on occurrence of loss of one or more of said divided data (col. 12, lines 12-30).

As per claim 8, Staheli discloses parity data or ECC (Error Correction Code) is

used as said redundant data (col. 12, lines 39-48).

As per claim 9, Staheli discloses copied data of transmission data is used as said

redundant data (col. 14, lines 36-43).

As per claim 10, Staheli discloses the original data and the redundant data are

sent over separate communication networks (Fig. 1, elements 30, 40 and 50). Figure 1,

shows link interfaces 34 and 44 as a part of the relay devices 30 and 40.

As per claim 11, Staheli discloses a data copying system comprising:

a first storage unit (Fig. 1, element 16)

and a second storage unit (Fig. 1, element 20)

data stored in said first storage unit being copied by mirroring or backup to said

second storage unit (col. 8, lines 49-55) over a communication network (Fig. 1, element

50)

wherein said first storage unit includes: data transfer processing means for

controlling data transfer and redundancy processing means for creating at least one

redundant data for error correction from the original data to be transmitted (col. 12, lines
39-48)

Staheli fails to explicitly disclose transmitting data in separate data transmission
units.

Fukuhara teaches:

said source unit transmitting the original data and the redundant data in separate
data transmission units (Fig. 6 and 7) and (Fig. 5, element 124).

As per claim 12, Staheli discloses data restoration means for executing error
correction processing using the redundant data received from said first storage unit (col.
6, lines 7-23)

and storage processing means for storing the data restored by said data
restoration means on a recording medium (Fig. 2, element 66)

wherein said data restoration means executes error correction processing before
completion of reception of an entire assemblage of data comprised of a set of the
original data and the redundant data, at a stage when a portion of said data set enabling
partial error correction of said original data is received (col. 6, lines 7-23).

As per claim 13, Staheli discloses said redundancy processing means in said first
storage unit divides said original data into divided data and creates redundant data
which enables restoration of the original data even on occurrence of loss of one or more

of said divided data (col. 12, lines 12-30).

As per claim 14, Staheli discloses said redundancy processing means uses
parity data or ECC (Error Correction Code) as said redundant data (col. 12, lines 39-
48).

As per claim 15, Staheli discloses said redundancy processing means uses
copied data of transmission data as said redundant data (col. 14, lines 36-43).

As per claim 16, Staheli discloses said data transfer processing means sends the
original data and the redundant data over separate communication network (Fig. 1,
elements 30, 40 and 50). Figure 1, shows link interfaces 34 and 44 as a part of the relay
devices 30 and 40.

As per claim 17, Staheli discloses a data copying system comprising:

a storage unit (Fig. 1, element 16) of an operation system (Fig. 1, element 10)

and a storage unit (Fig. 1, element 20) of a standby system (Fig. 1, element 12)

data stored in said storage unit of the operation system being copied to said

storage unit of the standby system over a communication network by mirroring (col. 8,

lines 49-55)

wherein said storage unit of the operation system includes: delay write

requesting means for sending data as a target of writing and a delay write request to

said storage unit of the standby system on occurrence of a data write request (col. 6,

lines 24-34)

wherein said storage unit of the standby system includes: temporary storage

means for temporarily storing data (Fig. 2, elements 66, 68)

storage processing means for storing received data in said temporary storage

means responsive to the delay write request received and for storing the data stored in

said temporary storage means in said recording medium on receipt of said delay write

execution request (col. 6, lines 24-34).

Staheli fails to explicitly disclose a restart enabling point.

Fukuhara teaches:

write execution requesting means for sending a delay write execution request to

said storage unit of the standby system on receipt from a higher rank device (col. 7,

lines 43-50) of a restart enabling point notification asserting a restart enabling point for

which an application may directly restart operation for prevailing data state (col. 9, lines

25-30 and 14-21).

As per claim 18, Staheli discloses wherein said storage processing means in said

storage unit of the standby system on receipt of one delay write execution request

causes data stored in said temporary storage means to be stored in the recording

medium when data associated with the delay write request transmitted between a delay

write execution request directly previous to said one delay write execution request and

said one delay write execution request have all been stored in said temporary storage

means and when the data transmitted before said directly previous delay write

execution request have been stored in said recording medium (col. 6, lines 24-34).

Staheli fails to explicitly disclose sending requests asynchronously.

Fukuhara teaches:

the delay write requesting means and the delay write execution requesting

means in said storage unit of the operation system asynchronously send a delay write

request and a delayed write execution request to said storage unit of the standby

system (col. 7, lines 16-21).

As per claim 19, Staheli discloses when an abnormality occurs in the operation

system, said storage processing means in said storage unit of the standby system

discards data stored in said temporary storage means (Fig. 4).

As per claim 27, Staheli discloses a computer program product comprising a

computer usable medium having computer readable program code therein, said

program code causing a computer provided in a relaying device in a data copying

system,

in which data in a first storage unit is copied by mirroring or backup to a second

storage unit (col. 8, lines 49-55) via a communication network (Fig. 1, element 50)

and the relaying device (Fig. 1, elements 30,40) to execute the steps of: causing

storage of data received from said first storage unit in a recording medium in the

relaying device; sending a response (col. 12, lines 2-11) to said first storage unit on

storage of data in said recording medium in said relaying device; and sending the data

stored in the recording medium in the relaying device to said second storage unit (col.

12, lines 2-11)

Staheli fails to explicitly disclose a relaying device in a different location.

Fukuhara teaches:

Wherein said relaying device is provided in a location that is pre-calculated and

different from a location of said first and second storage units, so that, even if said first

storage device cannot be operated due to a disaster, the operation of said relaying

device can be continued (col. 18, lines 23-34).

As per claim 28, Staheli discloses a computer program product comprising a

computer usable medium having computer readable program code therein, said

program code causing a computer provided in a first storage unit (Fig. 1, element 16) in

a data copying system, in which data in the first storage unit is copied by mirroring or

backup to a second storage unit (col. 8, lines 49-55) via a communication network (Fig.

1, element 50) to execute the steps of: forming at least one redundant data for error

correction from transmitted original data (col. 6, lines 7-23)

Staheli fails to explicitly disclose transmitting data in separate data transmission

units.

Fukuhara teaches:

said source unit transmitting the original data and the redundant data in separate

data transmission units (Fig. 6 and 7) and (Fig. 5, element 124).

As per claim 29, Staheli discloses a computer program product comprising a

computer usable medium having computer readable program code therein, said

program code causing a computer provided in an operation storage unit in a data

copying system, in which data in the operation storage unit is copied by mirroring to a

standby storage unit (col. 8, lines 49-55) via a communication network (Fig. 1, element

50) to execute the steps of: sending data to be written and a delay write request

instructing storage of the data in a temporary storage device to said storage unit of the

standby system, on occurrence of a data write request; sending to said storage unit of

the standby system a delay write execution request instructing storage in the recording

medium of data stored in the temporary storage device on receipt from a higher rank

device of a restart enabling point notification asserting a restart enabling point for which

an application may directly restart operation for prevailing data state (col. 6, lines 24-34)

Staheli fails to explicitly disclose a relaying device in a different location.

Fukuhara teaches:

Wherein said relaying device is provided in a location that is pre-calculated and

different from a location of said first and second storage units, so that, even if said first

storage device cannot be operated due to a disaster, the operation of said relaying

device can be continued (col. 18, lines 23-34).

As per claim 31, Staheli fails to explicitly disclose a plurality of relaying devices.

Fukuhara teaches:

a plurality of said relaying devices (Fig. 3, *multicasting engine*), wherein said data transfer processing means in said first storage unit simultaneously sends data stored in said first storage unit to a plurality of said relaying devices (Fig. 21).

As per claim 32, Staheli discloses a higher rank device of the operation system employing the storage unit of the operation system includes restart enabling point notification means for sending a restart enabling point notification to said storage unit of the normal system when timing is a restart enabling point (col. 6, lines 24-34)

wherein a higher rank device of the standby system employing the storage unit of the standby system on detection of an abnormality of said operation system notifies the storage unit of the standby system of the occurrence of an abnormality to prompt restoration of the status of the storage unit of the standby system to a state corresponding to said restart enabling point to restart the processing when the state of the storage unit of the standby system is the state corresponding to the restart enabling point (col. 6, lines 7-23).

As per claim 33, Staheli discloses a higher rank device of the operation system employing the storage unit of the operation system includes: execution image transfer means for transferring an execution image indicating the processing executing state of

the operation system to a higher rank device of the standby system employing the

storage unit of the standby system (col. 14, lines 36-53)

optional time point restart enabling point notification means for sending a restart

enabling point notification at a timing of the execution image transmitting means

transmitting an execution means (col. 6, lines 24-34)

wherein said higher rank device of the standby system employing said storage

unit of the standby system includes execution image saving means for saving an

execution image transferred by said execution image transfer means, said execution

image transfer means transferring an execution image at an optional time point to said

higher rank device of the standby system (col. 14, lines 36-53)

wherein said higher rank device of the standby system employing said storage

unit of the standby system on detection of an abnormality of said operation system

notifies the storage unit of the standby system of the occurrence of the abnormality to

prompt restoration of the status of the storage unit of the standby system to a state

corresponding to said restart enabling point, so as to restart the processing, using an

execution image, when the state of said storage unit of the standby system is the state

corresponding to the restart enabling point (col. 14, lines 36-53).

As per claim 34, Staheli discloses the execution image transferring means in said

higher rank device of the operation system transfers only the portion changed from the

execution image transferred last time (Fig. 5).

Claims 20, 22-26, 30 are rejected under 35 U.S.C. 103(a) as being unpatentable

over West et al. (U.S. Patent No. 6,131,148) in view of Fukuhara et al. (U.S. Patent No.

6,760,861).

As per claim 20, West discloses a data copying system comprising:

a storage unit of an operation system (Fig. 1, elements 12, 32)

a storage unit of a standby system, data in said storage unit of the operation

system being copied by mirroring (col. 4, lines 28-31) to said storage unit of the standby

system (Fig. 1, element 14) over a communication network (Fig. 1, element 40)

wherein said storage unit of the operation system includes: write requesting

means which, on occurrence of a data write request, sends data to be written and a

write request to said storage unit of the standby system (col. 4, lines 7-18)

wherein said storage unit of the standby system includes: snap shot forming

means which, on receipt of a write request, allocates an area for writing data

corresponding to said write request to store the data in said recording medium and to

update the storage information indicating the state of data storage in said recording

medium, and which on receipt of the snap shot forming request forms a snap shot (col.

4, lines 43-55)

wherein when the snap shot forming means in said storage unit of the standby

system forms a snap shot, said write requesting means sends a write request to said

storage unit of the standby system after said snap shot forming means completes

forming the snap shot (col. 4, lines 7-18)

Staheli fails to explicitly disclose a restart enabling point.

Fukuhara teaches:

snap shot formation requesting means for sending a snap shot forming request to said storage unit of the standby system on receipt from a higher rank device (col. 7, lines 43-50) of a restart enabling point notification asserting a restart enabling point for which an application may directly restart operation for prevailing data state (col. 9, lines 25-30 and 14-21).

It would have been obvious to one of ordinary skill in the art at the time the invention to use the method of snapshot copy of West et al. in combination with the system of providing continuous operation independent of device failure or disaster of Fukuhara et al. to effectively recover from failure/disasters.

One of ordinary skill in the art at the time the invention would have been motivated to make the combination because West et al. discloses a peer-to-peer remote copy (PPRC) session or remote backup copy session will refer to an implementation of a backup copying sequence of updated data in a primary volume to a secondary volume (col. 3, lines 12-24). Fukuhara et al. discloses a system and method for data processing and/or data storage, which provides continuous computing operations independent of device failures or unavailability (col. 4, lines 65-67 through col. 5, lines 1-7).

As per claim 22, West discloses said write requesting means and the snap shot formation requesting means in the storage unit of the operation system asynchronously

send the write request and the snap shot forming request to the storage unit of the

standby system (col. 4, lines 7-11)

said snap shot forming means in said storage unit of the standby system on

receipt of each write request awaits storage of data corresponding to the write request

in the recording medium until the snap shot based on the snap shot forming request

directly before the received write request is formed completely (col. 4, lines 11-18)

said snap shot forming means on receipt of one snap shot forming request

forming a snap shot when a snap shot based on the directly previous snap shot forming

request is completed and all data corresponding to the write request transmitted

between said directly previous snap shot forming request and said one snap shot

forming request have all been stored in the recording medium (col. 4, lines 7-18 and 43-

55).

As per claim 23, West discloses when an abnormality occurs in an operation

system, said snap shot forming means in the storage unit of the standby system

releases the area of the recording medium, where data has been stored after forming

the directly previous snap shot, to a non-use state, to restore the stored information to

the state at the time of forming the directly previous snap shot (col. 7, lines 26-50).

As per claim 24, West discloses a higher rank device of the operation system

employing the storage unit of the operation system (col. 6, lines 12-24) includes restart

enabling point notification means for sending a restart enabling point notification to said

storage unit of the normal system when timing is a restart enabling point (col. 7, lines 26-50)

wherein a higher rank device of the standby system employing the storage unit of the standby system on detection of an abnormality of said operation system notifies the storage unit of the standby system of the occurrence of an abnormality to prompt restoration of the status of the storage unit of the standby system (col. 3, lines 41-49) to a state corresponding to said restart enabling point to restart the processing when the state of the storage unit of the standby system is the state corresponding to the restart enabling point (col. 6, lines 66-67 through col. 7, lines 1-9).

As per claim 25, West discloses a higher rank device of the operation system employing the storage unit of the operation system includes: execution image transfer means for transferring an execution image indicating the processing executing state of the operation system to a higher rank device of the standby system employing the storage unit of the standby system (col. 6, lines 12-24)

optional time point restart enabling point notification means for sending a restart enabling point notification at a timing of the execution image transmitting means transmitting an execution means (col. 7, lines 26-50)

wherein a higher rank device of the standby system employing said storage unit of the standby system includes execution image saving means for saving an execution image transferred by said execution image transfer means, said execution image

transfer means transferring an execution image at an optional time point to said higher

rank device of the standby system (col. 6, lines 12-24)

wherein said higher rank device of the standby system employing said storage

unit of the standby system on detection of an abnormality of said operation system

notifies the storage unit of the standby system of the occurrence of the abnormality to

prompt restoration of the status of the storage unit of the standby system to a state

corresponding to said restart enabling point, so as to restart the processing, using an

execution image, when the state of said storage unit of the standby system is the state

corresponding to the restart enabling point (col. 7, lines 26-50).

As per claim 26, West discloses the execution image transferring means in said

higher rank device of the operation system transfers only the portion changed from the

execution image transferred last time (col. 5, lines 26-36).

As per claim 30, West discloses a computer program product comprising a

computer usable medium having computer readable program code therein, said

program code causing a computer provided in an operation storage unit in a data

copying system, in which data in the operation storage unit is copied by mirroring to a

standby storage unit (col. 4, lines 28-31) via a communication network (Fig. 1, element

40) to execute the steps of: sending data to be written and a write request instructing

writing the data in a recording medium, to said storage unit of the standby system (Fig.

1, element 14)

Staheli fails to explicitly disclose a restart enabling point.

Fukuhara teaches:

and sending to said storage unit of the standby system a snap shot formation

requesting means for sending a snap shot forming request to said storage unit of the

standby system on receipt from a higher rank device (col. 7, lines 43-50) of a restart

enabling point notification asserting a restart enabling point for which an application may

directly restart operation for prevailing data state (col. 9, lines 25-30 and 14-21).

Response to Arguments

Applicant's arguments have been fully considered with the examiner's response

detailed below.

Applicant's arguments see pages 19-27, filed September 21, 2006 with respect

to the rejection(s) of claim(s) 1-34 under 35 USC § 102 and 35 USC § 103 have been

fully considered and are persuasive. Therefore, the rejection has been withdrawn.

However, upon further consideration, a new ground(s) of rejection is made over Staheli

et al. (U.S. Patent No. 5,537,533) in view of West et al. (U.S. Patent No. 6,131,148) and

further view of Fukuhara et al. (U.S. Patent No. 6,760,861). Refer to the corresponding

section of the claim analysis for details.

Conclusion

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Elmira Mehrmanesh whose telephone number is (571)

272-5531. The examiner can normally be reached on 8-4:30 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Robert W. Beausoliel can be reached on (571) 272-3645. The fax phone

number for the organization where this application or proceeding is assigned is 571-

273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).